

HEAT EXCHANGER ASSEMBLY WITH
DISSIMILAR METAL CONNECTION CAPABILITY
ABSTRACT OF THE DISCLOSURE

A heat exchanger assembly designed for use as a fluid cooler formed of a first
5 metal that includes a dissimilar metal connection allowing the exchanger to be utilized
and reliably secured to another structure formed of a second metal. The assembly
provides an easy way to cool engine exhausts, oil or another fluid flowing through the
exchanger by transferring its heat to a cooling fluid flowing around the exchanger, or
vice versa. The exchanger of the assembly is formed from a number of heat exchanger
10 modules . In an embodiment intended particularly to cool diesel engine exhaust for a
turbocharger, a steel or stainless steel exhaust inlet/outlet cap which is exposed to the
high temperature exhaust is demountably attached to an all-aluminum heat exchange
unit connected to the engine cooling system. The high temperature exhaust and the
engine coolant follow generally parallel vertical paths through the heat exchanger in a
15 generally U-shaped path that permits a short compact construction. A further
embodiment utilizes a rubber-like sealant to seal the joints between an assembly of
modules and header plates which hold the assembly together and provide a base to
attachment of tanks.